



June 2006

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Vegetative Treatment Systems for Open Lot Runoff

A Collaborative Report



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Preface

Vegetative Treatment Systems for Open Lot Runoff was developed under the leadership of U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) through an Intergovernmental Personnel Act (IPA) agreement, with collaboration from representatives from several land grant universities, USDA Agriculture Research Service (ARS), U.S. Environmental Protection Agency (EPA), Iowa Department of Natural Resources, Iowa Cattlemen's Association, and private sector representatives. During 2004, a work group assembled the current scientific knowledge related to vegetative treatment systems and adapted that information into the recommendations contained within this document. For additional information contact:

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Acknowledgments

The knowledge, time, and expertise of the individuals who contributed to this document are greatly appreciated.

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Terminology

Animal Feeding Operation (AFO)	Typically used in reference to those livestock and poultry operations that do not require a permit under the EPA NPDES permit program.
Concentrated Animal Feeding Operation (CAFO)	Typically EPA or state environmental agency rules define those farms required to have a permit under the EPA NPDES permit program.
Effluent Limitation Guidelines (ELG)	These are the design and operating standards that a CAFO must meet to maintain compliance with the 1972 Federal Clean Water Act
Large CAFO	Typically national EPA or state environmental agency rules define those farms considered to be a Large CAFO based upon size. More than 1,000 beef cattle, 1,000 dairy heifers, or 700 mature dairy cows would be defined as a large CAFO by EPA regulations.
Medium or small CAFO	A permitting authority (EPA or state environmental agency) can define or designate an AFO as a CAFO based upon combination of size and environmental risk. See section 2 or http://www.lpes.org/cafo/02FS_Permit.pdf for more information.
National Pollution Discharge Elimination System (NPDES)	Commonly used to identify a EPA permit program created for point sources of pollution (including CAFOs) under the 1972 Federal Clean Water Act.
Permitting authority	A state regulatory agency or regional EPA office with the authority to write an NPDES permit for an individual CAFO.
Standard Operating Procedure (SOP)	A written procedure used to define the specific steps to be followed in the operation and maintenance of an agricultural system.
U.S. Environmental Protection Agency (EPA)	This agency has responsibility for administering water quality regulations related to animal feeding operations.
Vegetative Infiltration Basin (VIB)	A shallow basin containing perennial grass or forages through which all collected runoff water must infiltrate. Typically these systems include a tile drain system for collecting the infiltrate and bringing the treated runoff to the surface for additional treatment or application to grass or cropland.
Vegetative Treatment Area (VTA)	A vegetative area composed of perennial grass or forages used for the treatment of runoff from an open lot production system or other process waters.
Vegetative Treatment System (VTS)	A collection of treatment components, including at least one component based upon vegetation treatment that is used to manage the runoff from an open lot production system or other process waters.

